

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:)	
)	
MAHER ET AL.)	Group Art Unit: Unknown
)	
Application No.: NEW)	Examiner: Unknown
)	
Filed: HERewith)	
)	INFORMATION DISCLOSURE
For: MICROPROCESSOR WITH)	<u>STATEMENT</u>
HARDWARE CONTROLLED)	
POWER MANAGEMENT)	
_____)	

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A document identified as an Intel publication, entitled "Intel 82347 Power Management," bearing a date of May 1990 and having pages numbered 1-30 is of record for U.S. Patent No. 5,630,143 from which this application ultimately claims priority. Efforts to locate a copy of this reference have not been successful. However, a copy of another Intel document which is believed to be a later edition bearing a date of October 1990 is submitted herewith (with Form PTO-1449).

PATENT

Respectfully submitted,

VEDDER, PRICE, KAUFMAN & KAMMHOLZ, P.C.

Date: February 23, 2004

By: 

Mark A. Dalla Valle

Reg. No. 34,147

Attorney for Assignee
222 N. LaSalle St.
Chicago, IL 60601
312-609-7620
Customer No.: 23,418

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of)	Group Art Unit: N/A
)	
MAHER ET AL.)	
)	INFORMATION DISCLOSURE
Application No. TBD)	<u>STATEMENT</u>
)	
Filed: Herewith)	
)	
For: MICROPROCESSOR WITH)	Vedder, Price, Kaufman &
HARDWARE CONTROLLED)	Kammholz, P.C.
POWER MANAGEMENT)	222 North LaSalle Street
)	Chicago, Illinois 60601
)	(312) 609-7500
)	

Mail Stop Patent Application
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Sir:

Submitted herewith are patents, publications or other information may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

This Information Disclosure Statement:

- (a) ☒ accompanies the new patent application submitted herewith. 37 CFR § 1.97(a).
- (b) ☐ is filed within three months after the filing date of the application or within three months after the date of entry of the national stage of a PCT application as set forth in 37 CFR § 1.491.
- (c) ☐ as far as is known to the undersigned, is filed before the mailing date of a first Office Action on the merits.
- (d) ☐ is filed after the first office action and more than three months after the application's filing date or PCT national stage date of entry filing but, as far as is known to the undersigned, prior to the mailing date of either a final rejection or a notice of allowance, whichever occurs first, and is accompanied by either the fee (\$180) set forth in 37 CFR § 1.17(p) or a certification as specified in 37

CFR § 1.97(e), as checked below.

- (e) ☐ is filed after the mailing date of either a final rejection or a notice of allowance, whichever occurred first, and is accompanied by the fee (\$180) set forth in 37 CFR § 1.17(i)(1) and a certification as specified in 37 CFR § 1.97(e), as checked below. This document is to be considered as a petition requesting consideration of the information disclosure statement.

[If either of boxes (d) or (e) are checked above, the following "certification" under 37 CFR § 1.97(e) may need to be completed.] The undersigned certifies that:

- (f) ☐ Each item of information contained in the information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.
- (g) ☐ No item of information contained in this information disclosure statement was cited in a communication mailed from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of this information disclosure statement.

A list of the patent(s) or publication(s) is set forth on the attached Form PTO-1449 (Modified).

A copy of the items on PTO-1449 (Modified) is supplied herewith:

- (h) ☐ each (i) ☐ none (j) ☒ only those listed below:

Foreign Patent Document	Publication Date	Patentee
GB 2127999	4/30/86	Kitchen
EPO 0167853	6/11/84	Compaq
EPO 0201020	4/28/86	Honeywell
EPO 0242010	1/12/87	Int'l Business Machines
EPO 0349726	5/5/89	Toppan
JPO SHO59[1984]-167752	10/25/83	Nippoin Denki
JPO SHO58[1983]-205226	5/25/82	Fujitsu Ltd.
JPO HEI31[1991]-116210	10/12/81	Hitachiseisakusho KK
JPO SHO55[1980]-47549	9/28/78	Nippon Texas Instruments
EPO 0451661A2	3/30/91	Matsuzaki
GB 2010551	12/19/77	Bendix

Foreign Patent Document	Publication Date	Patentee
GB 2130765	11/20/82	SWF
PCT WO 92/10032	11/26/90	Adaptive Solutions
EPO 0358423	9/4/89	Advanced Micro Defices
EPO 0363567	6/22/89	Int'l Business Machines
EPO 0385567	1/18/90	Amport
EPO 0425410A2	10/29/89	Watts
JPO 58182736	10/25/83	Fujitsu
EPO 0229692	7/22/87	Int'l Business Machines
PCT WO 92/21081	11/26/92	Zenith Data Systems Corp.
EPO 0368144	5/16/90	Fourcroy et al.
EPO 0172344	2/26/86	Katayama

DESIGN AND ELECTRONIK, "186-Processors with Low Current Drain Modules," Vol. 23, November 5, 1991, p. 8

European Search Report dated July 28, 1993 for E/93302399

INTEL, "Intel 82347 Power Management PC Peripheral," October 1990, pp. 1-55 – 1-80

INTEL, "386 DX Microprocessor Programmer's Reference Manual" 1990, pp. 4-6 and 8-4.

INTEL, 386 SL Microprocessor SuperSet, 286 SL Microprocessor System Design Guide 1990, Introduction to the SL Superset, Chapter 1, pp. 1-1 through 1-3, System and Power Management, Chapter 14, pp. 14-1 through 14-23, September 1990.

Those patent(s) or publication(s) which are marked with an asterisk (*) in the attached form PTO-1449 (Modified) are not supplied because they were previously cited by or submitted to the Office in a prior application no., filed and relied upon in this application for an earlier filing date under 35 U.S.C. § 120.

A concise explanation of relevance of the items listed on form PTO-1449 (Modified) is:

(k) ☒ not given

(l) ☐ given for each listed item

- (m) ☐ given for only non-English language listed item(s) [Required]
- (n) ☐ is in the form of an English language copy of a Search Report from a foreign patent office, issued in a counterpart application, which refers to the relevant portions of the references [copy attached].

The Examiner is reminded that a "concise explanation of the relevance" of the submitted items "may be nothing more than identification of the particular figure or paragraph of the patent or publication which has some relation to the claimed invention," MPEP § 609.

While the information and references disclosed in this Information Disclosure Statement may be "material" pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

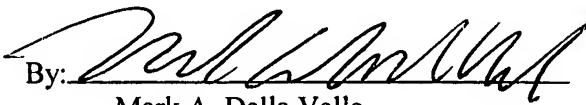
In accordance with 37 CFR § 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR § 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR § 1.98 and MPEP § 609 and the Examiner is respectfully requested to consider the listed references.

- ☐ The Commissioner is hereby authorized to charge our Deposit Account No. 22-0259 for any fees required in connection with the filing of this Information Disclosure Statement. **A duplicate copy of this Notice is enclosed for this purpose.** In particular, in the event that an Office Action has crossed in the mail with this Information Disclosure Statement, the Commissioner is authorized to charge the above-named deposit account for any fees required pursuant to CFR §§ 1.17(p) or 1.17(i)(1).

Respectfully submitted,

VEDDER, PRICE, KAUFMAN & KAMMHOLZ, P.C.

Dated: February 23, 2004

By: 
Mark A. Dalla Valle
Reg. No. 34,147

Attorney for Applicant(s)

Atty. Docket No: P04461-D10
(11461.00.0188)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	P04461-D10

Sheet

of

OTHER PRIOR ART—NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		DESIGN AND ELECTRONIK, "186-Processors with Low Current Drain Modules," Vol. 23, November 5, 1991, p.8	
		European Search Report dated July 28, 1993 for E/93302399	
		INTEL, "Intel 82347 Power Management PC Peripheral," October 1990, pps. 1-55-1-80	
		INTEL, "386 DX Microprocessor Programmer's Reference Manual" 1990, pp. 4-6 and 8-4.	
		INTEL, 386 SL Microprocessor SuperSet, 386 SL Microprocessor System Design Guide 1990, Introduction to the SL Superset, Chapter 1, pp. 1-1 through 1-3, System and Power Management, Chapter 14, pp 14-1 through 14-23, September 1990.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 120 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	PO4461-D10

Sheet 3

of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 4,780,843	10/25/88	Tietjen	
		US- 4,796,235	01/03/89	Sparks et al.	
		US- 4,825,407	04/25/89	Loessel et al.	
		US- 4,841,440	06/20/89	Yonezu et al.	
		US- 4,851,987	07/25/89	Day	
		US- 4,381,552	04/26/83	Nocilini et al.	
		US- 4,698,748	10/06/87	Juzswick et al.	
		US- 4,980,836	12/25/90	Carter et al.	
		US- 5,142,684	08/25/92	Perry et al.	
		US- 5,218,704	06/08/93	Watts Jr.	
		US- 5,222,239	06/22/93	Rosch	
		US- 5,241,680	08/31/93	Cole et al.	
		US- 5,276,889	01/04/94	Shiraishi et al.	
		US- 5,355,503	10/11/94	Soffel et al.	
		US- 5,361,364	11/01/94	Nagashige et al.	
		US- 5,388,265	02/07/95	Volk	
		US- 6,343,363	01/29/02	Maher et al.	
		US- 6,233,691	05/15/01	Atkinson	
		US- 6,243,820	06/05/01	Rosch	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		PCT WO 92/10032	11/26/90	Adaptive Solutions		
		EPO 0358423	09/04/89	Advanced Micro Defices		
		EPO 0363567	06/22/89	Int'l Business Machines		
		EPO 0385567	01/18/90	Amport		
		EPO 0425410A2	10/29/89	Watts		
		JPO 58182736	10/25/83	Fujitsu		

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	P04461-A10

Sheet 4 of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 6,311,287	10/30/01	Dischler et al.	
		US- 6,397,340	05/28/02	Watts Jr. et al.	
		US- 2001/0001880	05/24/01	Watts Jr.	
		US- 5,560,017	09/24/96	Barrett et al.	
		US- 5,560,020	09/24/96	Nakatani et al.	
		US- 5,560,024	09/24/96	Harper et al.	
		US- 5,625,826	04/29/97	Atkinson	
		US- 5,632,037	05/20/97	Maher et al.	
		US- 5,842,029	11/24/98	Conary et al.	
		US- 5,935,253	08/10/99	Conary et al.	
		US- 6,006,336	12/21/99	Watts Jr. et al.	
		US- 6,029,249	02/22/00	Atkinson	
		US- 6,173,409	01/09/01	Watts Jr. et al.	
		US- 6,223,293	04/24/01	Foster et al.	
		US- 5,396,635	03/07/95	Fung	
		US- 5,418,969	05/23/95	Matsuzaki et al.	
		US- 5,428,790	06/27/95	Harper et al.	
		US- 5,452,401	05/08/04	Lin	
		US- 5,457,790	10/10/95	Iwamura et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		EPO 0229692	07/22/87	Int'l Business Machines		
		PCT WO 92/21081	11/26/92	Zenith Data Systems Corp.		
		EPO 0368144	05/16/90	Fourcroy et al.		
		EPO 0172344	02/26/86	Katayama		

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	P04461- D10

Sheet 1 of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 6,088,807	07/11/00	Maher et al.	
		US- 5,657,483	08/12/97	Kardach et al.	
		US- 5,361,392	11/01/94	Fourcroy et al.	
		US- 4,893,271	01/09/90	Davis et al.	
		US- 4,907,150	03/06/90	Arroyo et al.	
		US- 5,021,983	06/04/91	Nguyen et al.	
		US- 5,025,387	06/18/91	Frane	
		US- 5,036,493	07/30/91	Nielsen	
		US- 5,070,450	12/03/91	Holman Jr. et al.	
		US- 5,083,266	01/21/92	Watanabe	
		US- 5,086,387	02/04/92	Arroyo et al.	
		US- 5,167,024	11/24/92	Smith et al.	
		US- 5,203,003	03/13/93	Donner	
		US- 5,175,853	12/29/92	Kardach et al.	
		US- 5,237,699	08/17/93	Little et al.	
		US- 5,369,771	11/29/94	Gettel	
		US- 5,390,350	02/14/95	Chung et al.	
		US- 5,392,441	02/21/95	Brasher et al.	
		US- 5,404,546	04/04/95	Stewart	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
		GB 2127999	04/30/86	Kitchen		
		EPO 0167853	06/11/84	Compaq		
		EPO 0201020	04/28/86	Honewell		
		EPO 0242010	01/12/87	Int'l Business Machines		
		EPO 0349726	05/05/89	Toppan		
		JPO SHO59[1984]-167752	10/25/83	Nippoin Denki		

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	P04461-010

Sheet 2

of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,410,711	04/25/95	Stewart	
		US- 5,432,946	07/11/95	Allard et al.	
		US- 4,590,553	05/20/86	Noda	
		US- 5,630,107	05/13/97	Carmean et al.	
		US- 5,630,143	05/13/97	Maher et al.	
		US- 4,204,249	05/20/80	Dye et al.	
		US- 4,267,577	05/12/81	Hashimoto et al.	
		US- 4,293,927	10/06/81	Hoshii	
		US- 4,312,035	01/19/82	Greene	
		US- 4,316,247	02/16/82	Iwamoto	
		US- 4,317,180	02/23/82	Lies	
		US- 4,317,181	02/23/82	Teza et al.	
		US- 4,409,665	10/11/83	Tubbs	
		US- 4,417,320	11/22/83	Ei	
		US- 4,573,117	02/25/86	Boney	
		US- 4,615,005	09/30/86	Maejima et al.	
		US- 4,748,559	05/31/88	Smith et al.	
		US- 4,758,945	07/19/88	Remedi	
		US- 4,766,567	08/23/88	Kato	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
		JPO SHO58[1983]-205226	05/25/82	Fujitsu Ltd.		
		JPO HEI31[1991]-116210	10/12/81	Hitachiseisakusho KK		
		JPO SHO 55[1980]-47549	09/28/78	Nippon Texas Instruments		
		EPO 0451661A2	03/30/91	Matsuzaki		
		GB 2010551	12/19/77	Bendix		
		GB 2130765	11/20/82	SWF		

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	P04461-D10

Sheet 5

of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,457,801	10/10/95	Aihara	
		US- 5,461,266	10/24/95	Koreeda et al.	
		US- 5,475,848	12/12/95	Ikeda	
		US- 5,487,181	01/23/96	Dailey et al.	
		US- 5,546,591	08/13/96	Wurzburg et al.	
		US- 5,548,765	08/20/96	Tsunoda et al.	
		US- 4,748,559	05/30/88	Smith et al.	
		US- 5,339,446	08/16/94	Yamasaki et al.	
		US- 3,678,463	07/18/72	Peters	
		US- 4,395,756	07/26/93	Daniels	
		US- 4,481,581	11/06/84	Johnson	
		US- 4,545,030	10/01/85	Kitchin	
		US- 4,616,335	10/07/86	Howe Jr. et al.	
		US- 4,653,018	03/24/87	Stadlmeier et al.	
		US- 4,720,811	01/19/88	Yamaguchi et al.	
		US- 4,835,737	05/30/89	Herrig et al.	
		US- 4,570,219	02/11/86	Shibukawa et al.	
		US- 5,021,950	06/04/91	Nishikawa	
		US- 5,189,647	02/23/93	Suzuki et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	TBD
Filing Date	Herewith
First Named Inventor	Maher et al.
Art Unit	TBD
Examiner Name	TBD
Attorney Docket Number	PO4461-D10

Sheet 6

of

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 5,247,655	09/21/93	Khan et al.	
		US- 5,291,542	03/01/94	Kivari et al.	
		US- 5,410,713	04/25/95	White et al.	
		US- 5,481,731	01/02/96	Conary et al.	
		US- 5,528,790	06/25/96	Curran	
		US- 5,630,146	05/13/97	Conary et al.	
		US- 5,637,932	06/10/91	Koreeda et al.	
		US- 4,835,728	05/30/89	Si et al.	
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.